

ABSTRACT OF THE DISCLOSURE

A method of making a heated injection molding nozzle with an integral tip insert. First, an inner portion, an outer collar portion, and an electrical heating element are made and integrally brazed together in a vacuum furnace using a first nickel alloy brazing material. Then a tip insert is made having a desired configuration and seated in the front end of the inner portion and a second nickel alloy brazing material is applied around it. The second brazing material has a melting temperature which is substantially below that of the first brazing material. The tip insert is then integrally brazed in place by heating them to a temperature above the melting temperature of the second brazing material and below the melting temperature of the first brazing material. In addition to not affecting the metallurgical bonding between the other components, this allows the tip insert to be easily removed for replacement by again heating the nozzle to this same temperature.

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